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SENIOR SOFTWARE ENGINEER

10 years of experience building software solutions for life science and healthcare industries with Agile methodologies
Expert in object-oriented and functional design and programming
Focused on customer satisfaction, patient safety and product quality

Skill highlights

Programming languages and frameworks: C#, .NET, Javascript, C++, Powershell, PHP, HTML, F#, SQL, ASP.NET core MVC, Node.js, knockout.js, jQuery, WPF, Winforms, VTK, RDL

Integrated software environments and development tools: Visual Studio, Microsoft Azure, AWS, memory and performance profilers (AQTime, MemProfiler, DotMemory, DotTrace, ANTS profiling suite), Sysinternals suite, Wix

Continuous integration, code quality, automation tools and test frameworks: Git, SVN, GitHub, Hudson, Jenkins, Appveyor, Travis, Maven, Resharper, Artifactory, NDepend, NPM, gulp, Mocha, Chai, MSTest, NUnit, xUnit, Moq, DotMemoryUnit, Specflow, VersionOne, Leaptest

Modeling languages, patterns and methodologies: UML, architectural patterns, object-oriented design patterns, Scrum, XP (test-driven development, behavior-driven development, continuous integration)

Operating systems: Windows, Linux (Ubuntu, Fedora)

Quality management systems and medical imaging standards: ISO 13485, IEC 62304, ISO 14971, ISO 9001, IEC 62366, DICOM

Soft skills: Excellent problem solver, strong writing and communication skills, thorough, autonomous, well-organized, open-minded

Languages: French (mother tongue), English (full professional proficiency)

Professional experience

April 2012 – September 2017	Software development manager, Scrum master

*Bracco Imaging**, Geneva, Switzerland*

Managed a team of engineers developing a software medical device to quantify blood perfusion using Dynamic Contrast-Enhanced Ultrasonography (DCE-US)

- Designed and developed technical solutions for research and clinical indications in a highly regulated environment
- Designed and implemented C# components of a multi-threaded software solution using .NET Task Parallel Library (TPL) and asynchronous programming paradigms
- Implemented integration with an external multimodality imaging platform
- Improved software quality and team productivity by implementing good practices based on agile methodologies (Scrum, test-driven development, behavior-driven development, continuous integration)
- Improved architecture of a legacy software source code to improve maintainability and extensibility
- Defined product requirements, milestones and resource allocation with stakeholders based on feedback from end-users, post-marketing surveillance, risk analyses and usability validations
- Set up and followed-up on external collaborations with system manufacturers and medical opinion leaders
- Adapted the quality management system procedures and the medical device technical documentation based on new regulations and to enter new markets
- Successfully prepared and participated in quality system audits (ISO 13485, CE, KFDA)
- Supported marketing and sales departments in the form of talks, seminars, demos and brochure preparations to specialized clinicians at international scientific workshops and conferences
- Trained and mentored junior developers and interns to introduce design, development and debugging good practices
- Led the customer support team

January 2008 – March 2012	R&D software engineer

Persistent Systems Limited, formerly Agilent Technologies, Grenoble, France

Implemented C# and C++ components of Agilent's new generation chromatographic data systems in a Scrum team

- Implemented instrument control functionalities to make communication with instruments possible during data acquisition
- Designed WPF user interface modules and data access layer components to retrieve, analyze and display instruments data
- Wrote unit tests and functional tests to improve code quality

Created a software development kit (SDK) for a reporting component of a chromatographic data software

- Created a C# code generator to facilitate writing of custom reporting components
- Wrote documentation to facilitate creation of reporting component plug-ins
- Designed and developed a report template printer based on Microsoft RDL to allow customers to document the report template design in a human-readable format

Implemented and set up an internal continuous integration platform to address needs of developers, QA managers and product owners

- Developed a validation report generator to allow everyday product delivery in compliance with the ISO 9001 procedures
- Wrote scripts in Powershell to automate startup and analysis of static and dynamic code analysis tools (NDepend, NCover, FXCop) as part of the continuous integration platform

June 2006 – December 2007	Vision and X-ray software engineer

MSE Solex, La Boisse, France

Created vision / X-ray control applications for custom automated machines

- Developed a C++ multi-threaded application to optimize control time cycle
- Developed image processing algorithms to control parts compliance with customers standards
- Created communication protocol with an automaton through I/O card
- Set up machines and provided training and support for the application at the customer site

Open-source project contributions

HTBox/already

Solution focused on increasing awareness, efficiency and impact of preparedness campaigns delivered by humanitarian and disaster response organizations

- Written and refactored unit tests to enhance source code quality of controllers in an ASP.NET core MVC web application
- Updated UI controls to improve usability

techtalk/SpecFlow

Behavior-driven development testing solution for .NET-related platforms

- Added functionalities to the testing solution to improve debugging experience and to enable internationalization

Education and certifications

2012	Certified SCRUM master	Scrum.org
2003 - 2006	Master's degree, computer engineering	Ecole Nationale d'Ingénieurs de Brest (Brest, France)
2001 - 2003	Diplôme Universitaire Technologique	Institut Universitaire Technologique B (Villeurbanne, France)